

# COMBUSTION DEVICE FOR GAS TURBINE

**Patent number:** JP11248158

**Publication date:** 1999-09-14

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**Classification:**

- international: F23R3/26; F02C7/232; F23C7/02; F23C11/00;  
F23C11/00; F23R3/18; F23R3/28; F23R3/34

- european:

**Application number:** JP19980052528 19980304

**Priority number(s):**

**Also published as:**

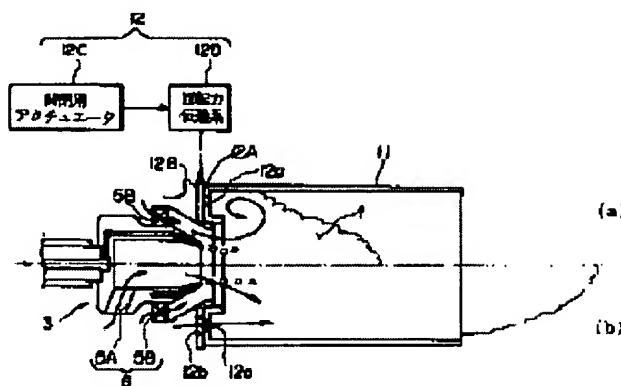


JP11248158 (A)

**Abstract of JP11248158**

**PROBLEM TO BE SOLVED:** To stabilize combustion while reducing the producing of nitrogen oxide by a method wherein eddy current is generated in the flame of mixed fluid of fuel and air, which is injected out of a pilot fuel injection valve, when an air opening and closing means is closed to retain the flame while the mixed fluid of fuel and air is pre-mixed and pre-evaporated when the air opening and closing means is opened.

**SOLUTION:** A mixing pipe 11 for flame retaining and combustion, which effects pilot combustion and premixing as well as pre-evaporation, is arranged at the downstream of a pilot fuel injection valve 3 while an air opening means 12 is arranged at the upstream side of the mixing tube 11. Under the condition of combustion by the pilot fuel injection valve 3, air from air intakes 5A, 5B is mixed into fuel and is injected out of the fuel injection valve 3 to burn whereby diffusion flame (f) is formed in the mixing tube 11 for flame retaining and combustion. On the other hand, a part of the diffusion flame (f) is spread laterally and eddy current is formed near a perforated plate 12A whereby flame is retained. In accordance with the increase of number of rotation of a gas turbine, fuel injection from the pilot fuel injection valve 3 and fuel injection, accompanying premixing and pre-evaporation from a main fuel injection valve 4, are effected.



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